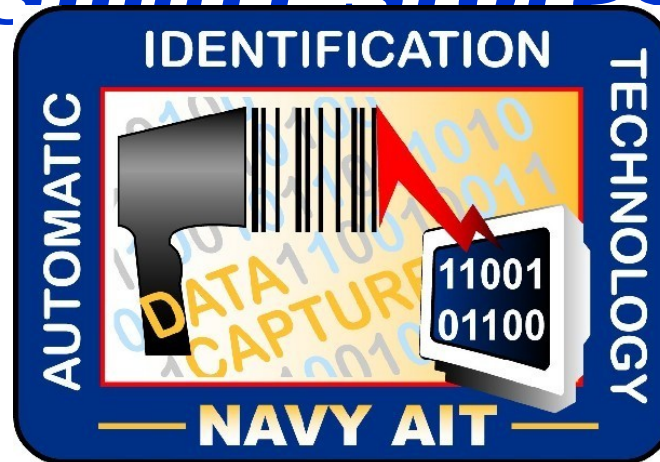


...from concept to acquisition

NAVAL WIRELESS NETWORKS SUMMIT

*Sponsored by: NETWARCOM and PEO ships
Hosted by: SPAWAR AND PEO C4I*

Wireless Convergence Enables Smart Stores



***Navy AIT Project Office
Naval Supply Systems Command***



Contents

- ✓ ***Vision***
- ✓ ***Business process re-engineering***
- ✓ ***Enabling the future***
- ✓ ***WLAN & Efforts currently underway***
- ✓ ***Solutions***
- ✓ ***Summary***
- ✓ ***Conclusion***

- ✓ *The Navy Vision is a system that optimizes an integrated supply chain by improving (shipboard) inventory management, asset visibility, and receipt processing.*
- ✓ *Smart Stores is one element of the Navy's plan towards the development of a re-engineered Navy supply distribution system.*



Getting to the Vision

Provide a comprehensive and integrated solution in support of the following processes, requirements and policies:

- ✓ ***DoD Radio Frequency Identification Policy (2 Oct 2003)***
 - ✓ ***Total Asset Visibility (Passive RFID)***
 - ✓ ***In-Transit Visibility (Active RFID)***
- ✓ ***DoD Unique Identification Policy (29 July 2003)***
 - ✓ ***Data Matrix format required***
 - ✓ ***In all new acquisitions (Jan 2004)***
- ✓ ***Sea Power 21***
 - ✓ ***Sea Basing Concept Of Operations (CONOPS)***
 - ✓ ***FORCENet***
 - ✓ ***Navy Marine Corps Portal (NMCP), formerly Task Force Web***
 - ✓ ***Joint Inter-Operability***
 - ✓ ***Common Operational Picture***
- ✓ ***CVN-21 Operational Requirements Document (ORD)***

Wireless LAN enables success



Business Process Re-engineering

Smart Stores is the integration of AIT within the business infrastructure of the ship to improve and automate the following afloat supply processes:

- ✓ Receipt Processing***
- ✓ Inventory Management***
- ✓ Underway Replenishment (VERTREP/CONREP)***
- ✓ Food Service Management (Break Outs)***
- ✓ Weapons Handling***
- ✓ Access control***
- ✓ Quality of Life***

BPR-Doing it with less

Enabling the future “Got IATO?”

- ***Ships***

- ✓ ***CVN-73: USS George Washington***
- ✓ ***CVN-67: John F. Kennedy (nearly complete)***
- ✓ ***USS Lincoln (Possible Fleet fielded WLAN)***
- ✓ ***USS Nimitz, (CVN-68)***
- ✓ ***DDG 68: USS The Sullivans - Installed Since April 1998***
- ✓ ***DDG-74: USS McFaul***
- ✓ ***DDG-83: USS Howard***
- ✓ ***DDG-87: USS Mason***
- ✓ ***AGF-11: USS Coronado***
- ✓ ***LPD USS Ponce***
- ✓ ***LHA USS Kearsage***
- ✓ ***LSD USS Ashland***
- ✓ ***LSD-47: Rushmore***
- ✓ ***USS BH Richard ARG***
- ✓ ***CG-59: USS Princeton***

- ***Submarines***

- ✓ ***Wireless SUBLAN Baseline***
- ✓ ***SSN-691: Memphis***
- ✓ ***SSN Norfolk***
- ✓ ***TRIDENTS***
- ✓ ***USS Alaska***
- ✓ ***USS Alabama***



Denotes **IATO**

Enabling the future Fleet Impact

Smart Stores

Supply	HM&E	Weapons	NAVAIR/MARCOR	Operations
Logistics	Automation	Automation	Vehicle Tracking	Mission Strike
Food Service	Logistics	Logistics	Material Tracking	Mission Plan
Medical	Maintenance	Maintenance	Logistics	Sustainment
Asset Visibility	Asset Visibility	Asset Visibility	Asset Visibility	total Asset Visibility
				Maintenance

Wireless LAN enables success



Enabling the future

- **Increased connectivity - “HOT SPOTS”**
 - ✓ Cover More area without the cost/ infrastructure
 - ✓ Connectivity to personnel anytime, anywhere - “Power to the Edge”
 - ✓ For shipboard large deck environments, could provide increased connectivity to temporary personnel such as embarked air wings.
 - ✓ Ability for personnel to conduct work and communicate (VoIP)
 - ✓ in mobile environments
- **Return on Investment (ROI)**
 - ✓ Increase productivity
 - ✓ Improved asset visibility
 - ✓ Quality of life/retention

Enabling the future

- ***Active RFID: (batteries included)***
 - ✓ *DoD Policy put on all ISO containers*
- ***Passive RFID: (batteries not required)***
 - ✓ *WalMart pushing the envelope*
 - ✓ *Metro Future Store with SAP/IBM and Intermec*
 - ✓ *EPC Global standards*
 - ✓ *DoD demonstrations*
- ***Navy status***
 - ✓ *Mostly pilot and lab type efforts*
 - ✓ *PHIMS WLAN has IATO from NMCI*

WLAN & Efforts currently underway

US Navy

Afloat:

- **Smart Storeroom**
 - ✓ **Proved feasibility of using RFID tags afloat**
 - ✓ **Standalone effort with dedicated PC**
- **Shipboard Movement Tracking (SMT)**
 - ✓ **USMC (*pending NETWARCOM approval*)**
 - ✓ **RFDC sponsored by PEO SHIPS (PMS 470L) and MARCORSYSCOM (PG10)**
 - ✓ **Using 3eTI WLAN Gear**
 - ✓ **F data capture- scan bar codes, transmit via 802.11**
- **Smart Stores with NAVSEA**
 - ✓ **CVN 21 Concept Support**

Ashore:

- ✓ **Norfolk Marine Ocean Terminal (*Shut down*)**
- ✓ **SIMA Norfolk (*Shut down*)**
- ✓ **Camp Lejeune (*pending NMCI approval*)**
- ✓ **RSO Norfolk (early stages)**

- ***DOD AIT III Contract award to Intermec***
 - ✓ *Add in slides from Intermec brief*
 - ✓ *Multifunctional handheld PC*
- ***The challenge***
 - ✓ ***DOD mandates WIN CE 4.2***
 - ✓ ***Built in 802.11 capabilities***
 - ✓ ***Optional accessories:***
 - ✓ *CAC reader uses IC*
 - ✓ *Air Fortress FIPS 140.2 cert*

How to do more with less:
Use more AIT

Contract Number **W91QUZ-04-R-0005**

ALL PDCTs have:

- ✓ **X-Scale Processor**
- ✓ **CE.NET 4.2**
- ✓ **Common SDK**
- ✓ **64MB RAM & 64MB ROM**
- ✓ **Non-Incendive Div 2 and IP-64**
- ✓ **1/4 Screen Color TFT display**
- ✓ **Touch & Pen Input**
- ✓ **802.11b/g radios**

Duration: Ten (10) Years
5 Years Hardware & Services
10 Years Maintenance &

Support



PDCT A



PDCT C



Zebra
PT 402



PDCT B

<http://www.cecomacw.army.mil>

Common Access Card (CAC) Accessory

- ✓ *Same module fits all PDCTs*
- ✓ *No cables required*
- ✓ *“Break-away” design*
- ✓ *Name and picture on card are viewable when in use*



- ***Wireless Network Management***
 - ✓ ***Wavelink Avalanche***
 - ✓ ***Server***
 - ✓ ***Client***
- ***Wireless Network Security***
 - ✓ ***Air Fortress AF-210 (FIPS 140.2)***
 - ✓ ***I-Launch admin control of handheld***
 - ✓ ***I-Browse admin control of web page access***

Summary

- **End State:**

- ✓ ***Automate shipboard business processes***
 - ✓ ***Receipt, stow, issue***
 - ✓ ***Enable mission tailored load outs***
- ✓ **Driving Requirements:**
- ✓ ***DoD RFID Implementation Policy***
- ✓ ***Sea Power 21***
- ✓ ***Future Ship Operational Requirements***

- **Impacts:**

- ✓ ***Logistics***
- ✓ ***HM&E***
- ✓ ***Maintenance***
- ✓ ***Weapons***
- ✓ ***QOL***

Conclusion

- ❖ *WLAN can enable meeting CNO manpower goals*
- ❖ *Need a clear road map on how to enable WLAN*
- ❖ *Need to put this into a contract requirements*